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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,655	06/16/2000	Shigeki Fujii	51270-245645	2592

7590 03/29/2004

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EXAMINER

LAO, LUN S

ART UNIT PAPER NUMBER

2643

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/595,655

Applicant(s)

FUJII, SHIGEKI

Examiner

Lun-See Lao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Introduction*

1. Claims 1-16 of U.S. Application 09/595,655 filed on 06/16/2000 are presented for examination.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (US PAT 5,440,639).

Consider claim 6, Suzuki teaches a sound processing apparatus comprising:

a signal separator (see fig.6, 18f and 18n) that separates an input audio signal of at least one system into a plurality of separated signal components (see col.10 line 36-56);

a sound processor (FIR1-FIR12) that subjects each signal component of at least part of the plurality of separated signal components to individual sound processing according to the signal component (see col.10 line 57-col.11 line 13); and

an output controller (14) that outputs the plurality of separated signal components as at least one audio signal after each signal component of the at least part thereof is subjected to the individual sound processing (see col.11 line 14-col.12 line 32).

Consider claims 7-8, Suzuki teaches a sound processing apparatus of the output controller (see fig.6, 14) synthesizes (see fig.6, 19L and 19R) the plurality of separated signal components (18f and 18n) with the at least part thereof subjected to the individual sound processing into a synthesized audio signal, and outputs the synthesized audio signal (see col.11 lines 12- 48); and a sound processing apparatus of the output controller (14) outputs the plurality of separated signal components (18f and 18n) with the at least part thereof subjected to the individual sound processing, separately as audio signals (col.11 line 48-col.12 line 52).

As to claims 1-3, these are method claims of claims 6-8 respectively. Thus note claims 6-8, respectively for rejection.

Consider claim 9 Suzuki teaches a sound processing apparatus of the signal separator (see fig.6,20) performs spectrum analysis upon said input audio signal to extract a specific signal component (cross-talk), and inherently subtracts (cannels out) the extracted specific signal component (cross-talk signal) from the input audio signal to obtain a remaining signal component (such as voice) of the input audio signal (see col. 12 lines 29-52).

Consider claims 10-11, Suzuki teaches a sound processing apparatus of the signal separator (see fig.6, 18f and 18n) comprises a plurality of signal enhancement/suppression devices (FIR1 and FIR 12, 20) that enhance part of a plurality of signal components contained in said input audio signal, and suppress remaining signal components (see col.12 line 8- 52); and a sound processing apparatus of the input audio signal comprises audio signals of a plurality of channels (see fig.6,

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16a,16b), and said signal separator comprises a plurality of signal separators (18f and 18n) corresponding respectively to said plurality of channels, and wherein each of said plurality of signal separators (18f and 18n) performs predetermined sound processing by supplementarily referring to at least one of the audio signals of at least one other channels than a channel corresponding thereto, thereby improving accuracy of separation of the input audio signal of the corresponding channel into a plurality of separated signal components (see col.11 line 14-col.12 line 52).

Consider claims 12-13, Suzuki teaches that a sound processing apparatus as of the sound processor comprises a sound field controller (see fig.6,14) that performs sound field control processing upon each signal component of the at least part of the plurality of separated signal components (see col.11 line 14-col.12 line 52); and a sound processing apparatus of the sound processor selectively eliminates (see fig.6, FIR 1-FIR12 by calculation) at least part of the plurality of separated signal components (18f and 18n), and uses an externally input audio signal, instead (see col.11 line 14-col.12 line 52).

Consider claims 14-16, Suzuki teaches a sound processing apparatus of the sound processor changes sound quality or voice quality of each signal component of at least part of the plurality of separated signal components (see fig.6, FIR 1-FIR12 and col.11 line 14-col.12 line 52); and a sound processing apparatus of the sound processor changes pitch (see figs 9-11) of each signal component of at least part of the plurality of separated signal components (see col.9 line 30-col.10 line 56); and a sound processing apparatus of the sound processor changes speed relative to time axis (time delay) or

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speech speed of each signal component of at least part of the plurality of separated signal components (see col.14 line 43-col. 15 line63).

Consider claim 4, Suzuki teaches a sound processing method of the input audio signal contains an ambient sound component (cross-talk) and an on-the-spot speech sound (voice) component in a live broadcasting, and said at least part of the plurality of separated signal components (see fig.6, 20, inherently separated voice and cross-talk, and cancels the cross-talk signal) comprises said ambient sound component (cross-talk) and said on-the spot speech sound component (voice and see col.12 line 29-53).

Consider claim 5, Suzuki teaches a sound processing method of the sound processing comprises sound field control processing (see fig.6 and abstract).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. DeVitt et al (US PAT 5,212,733); Desper (PCT WO 94/16538); Blum (PCT WO 99/08380) and Yumoto (US PAT 6,195,438) are recited to show other related to sound processing method and apparatus.

5. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington.

VA., Sixth Floor (Receptionist).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (703) 305-2259. The examiner can normally be reached on Monday-Friday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao, Lun-See  
Patent Examiner  
US Patent and Trademark Office  
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**DUC NGUYEN**  
**PRIMARY EXAMINER**